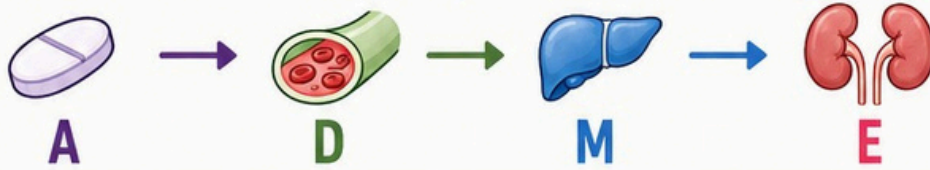
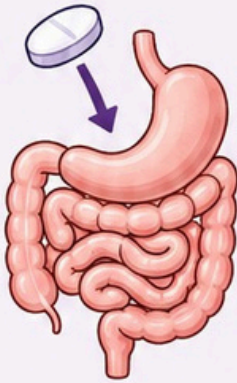


ADME

What the body does to a drug



A



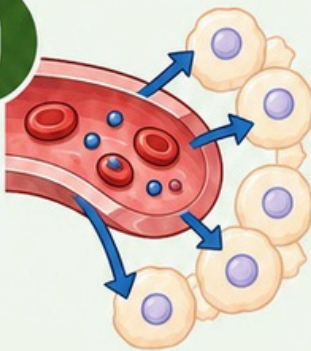
ABSORPTION

Drug enters the bloodstream

- Mainly occurs in the gastrointestinal tract
- Affected by route, formulation, food, pH and gut motility
- Bioavailability = fraction reaching systemic circulation

FROM SITE OF ADMINISTRATION → BLOOD

D



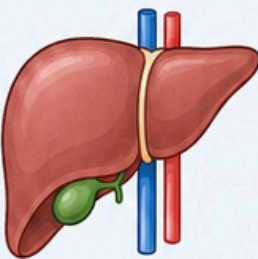
DISTRIBUTION

Drug moves from blood into tissues

- Affected by blood flow, protein binding and tissue permeability
- Volume of distribution (V_d) shows how widely a drug disperses
- Only unbound drug can cross membranes and have an effect

BLOOD → TISSUES

M



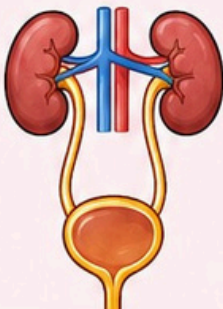
METABOLISM

Drug is chemically altered

- Mainly occurs in the liver
- Phase I: oxidation, reduction or hydrolysis
- Phase II: conjugation makes the drug easier to eliminate
- May produce inactive, active or toxic metabolites

MOSTLY LIVER

E



EXCRETION

Drug and metabolites leave the body

- Mainly occurs through the kidneys in urine
- Renal processes: filtration, secretion and reabsorption
- Other routes include bile, faeces and lungs
- Reduced kidney function may cause drug accumulation

MOSTLY KIDNEYS